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(71) Applicant (for all designated States except US): THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS [US/US]; 506 South Wright Street, 352 Henry Administration Building, Urbana, IL 61801 (US).

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(72) Inventors; and

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(75) Inventors/Applicants (for US only): MASEL, Richard, I. [US/US]; 2603 Lakeview, Champaign, IL 61822 (US). LARSEN, Robert [US/US]; 1003 Francis Dr., Apt. #1, Champaign, IL 61821 (US). HA, Su Yun [US/US]; 1523 Lincolnshire Dr., Apt. 9, Champaign, IL 61821 (US).

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(74) Agents: FALLON, Steven, P. et al.; Greer, Burns & Crain, Ltd., Suite 2500, 300 South Wacker Drive, Chicago, IL 60606 (US).

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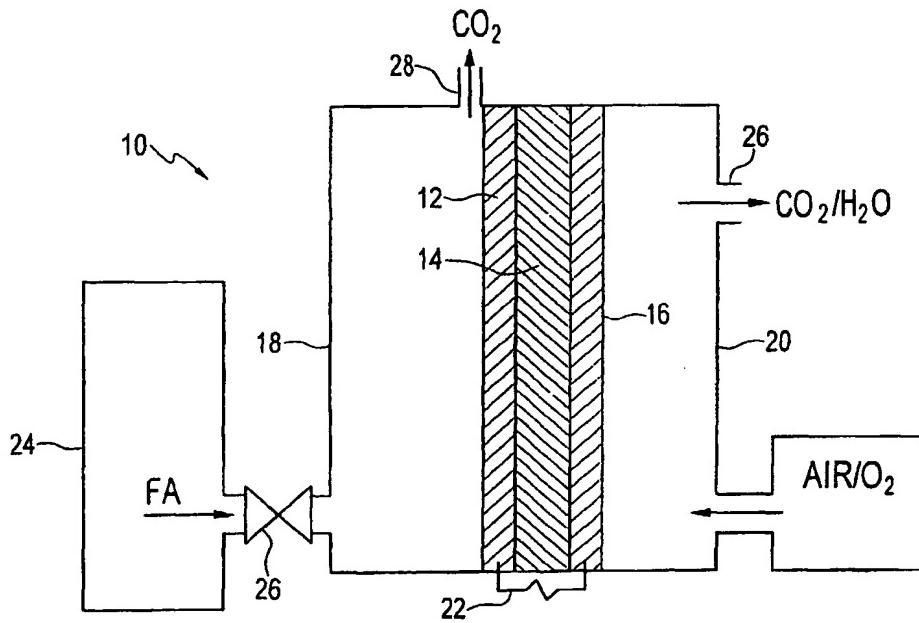
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(54) Title: FORMIC ACID FUEL CELLS AND CATALYSTS



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(57) Abstract: An exemplary fuel cell of the invention includes a formic acid fuel solution in communication with an anode (12, 134), an oxidizer in communication with a cathode (16, 135) electrically linked to the anode, and an anode catalyst that includes Pd. An exemplary formic acid fuel cell membrane electrode assembly (130) includes a proton-conducting membrane (131) having opposing first (132) and second surfaces (133), a cathode catalyst on the second membrane surface, and an anode catalyst including Pd on the first surface.



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC: 429/17,19,13,39,42,115
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,485,851A (NARAYANAN et al) 26 November 2002 (26.11.2002), column 2, lines 20-50.	1-34

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means		
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Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Faxsimile No. (571) 273-3201

Authorized officer

Monique M. Wills
Telephone No. 703-308-0661

DEBORAH A. THOMAS
PARALEGAL SPECIALIST

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